

America's Future in Civil Space

A symposium organized by the Aeronautics and Space Engineering Board and the Space Studies Board

The National
Academies of
SCIENCES
ENGINEERING
MEDICINE

(updated April 18, 2017)

National Academies Keck Center – Room 100

500 Fifth Street, NW, Washington, DC 20001

(Parking entrance is on the east side of the 500 block of 6th St. NW)

DRAFT AGENDA

Attendance by pre-registration only owing to the capacity of the meeting room

To register for the Webcast of this event visit <https://civil-space.eventbrite.com>

7:30 am Rooms Opens (Coffee Available)

Opening Session

8:30 am	Meeting Convenes (5 mins)	Michael Moloney National Academies, Director for Space and Aeronautics
8:35 am	Welcoming Remarks (10 mins)	Dan Mote, NAE , President Alan Epstein, ASEB , Chair Fiona Harrison, SSB , Chair
8:45 am	Opening Remarks (10 mins)	Robert Lightfoot , NASA, Acting Administrator
8:55 am	Kickoff Speaker to Set the Scene for the Symposium (10 mins)	David Spergel, SSB Symposium Organizing Committee, Co-Chair

Session 1: Space in Support of National and International Challenges

9:05 am	Session Themes <ul style="list-style-type: none">• What are the enduring opportunities and priorities for civil space?• How have things changed in the last decade?• How does the U.S. civil space endeavor enable the pursuit of national and global challenges?•	Moderator: Mark Lewis, ASEB Symposium Organizing Committee
	Recap of 2009 <i>America's Future in Space</i> Report (10 minutes)	General Lester Lyles America's Future in Space, Chair; Symposium Organizing Committee Co- Chair & NASA Advisory Council, Chair
	What's Changed Since 2009 (10 minutes)	Michael Lopez-Alegria MLA Space
	Moderated Discussion Panel – Moderator Mark Lewis (25 mins)	Marion Blakey , Rolls Royce N America Jean-Yves Le Gall , IAF & CNES Jonathan Lunine , Cornell University
	NASA Commentary – Tom Cremins (5 mins)	
	Audience Joins the Discussion (20 mins)	

10:15 am **BREAK** – Coffee Available

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Session 2: Future of Exploration and Discovery

10:45 am

Session Themes:

- **New Technology enabling a new era of Exploration and Discovery**
- **Reengineering our approach to Exploration and Discovery to a Systems Approach that combines technology, human endeavors in space, robotic exploration, and scientific discovery**

Introduction to the Theme

(15 minutes)

Moderated Discussion Panel – Moderator David Spergel

(25 mins)

NASA Commentary – Bill Gerstenmaier / Thomas Zurbuchen

(5 mins)

Audience Joins the Discussion

(30 mins)

Moderator: David Spergel, SSB

Symposium Organizing
Committee, Co-Chair

Jonathan Lunine, Cornell University

Vint Cerf, Google

John Grotzinger, Caltech

Pam Melroy, DARPA/NASA (Ret.)

12:00 pm **LUNCH** – Available Keck Center Cafeteria (3rd Floor)

Session 3: Public Private Partnerships in Pursuit of National Space Priorities

1:15 pm

Session Themes:

- **How can government – industry – NGO partnerships enable the pursuit of national space priorities?**
- **What are the lessons learned to date, and are there lessons from non-space sectors that help the civil space community understand when PPPs are a better tool in the tool box and what are the challenges and limitations?**

Intro to the Theme

(15 minutes)

Moderated Discussion Panel – Moderator Mary Lynne Dittmar

(25 mins)

NASA Commentary - Bill Gerstenmaier / Shana Dale

(5 mins)

Audience Joins the Discussion

(25 mins)

Moderator: Mary Lynne Dittmar, SSB

Symposium Organizing Committee

Roger Launius

Launius Historical Services

John D. Donahue, Harvard University

Dan Dumbacher, Purdue University

Alan Epstein, Pratt & Whitney & ASEP

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Lightning Talks on Science and Technology

2:25 pm **Lightning Talks: Technology Tall Poles**
(10 min Presentations & 5 min Q&A)

Moderator: Ray Colladay

America's Future in Space, Vice Chair
ASEB, Chair Emeritus

- **Environmental Control and Life Support in Space and on a Planetary Surface:** *Sarah Shull, NASA Johnson Space Center*
- **Entry, Control, Descent and Landing on Mars:** *Bobby Braun, University of Colorado*
- **Radiation Mitigation Technologies:** *Dave Murrow, Lockheed Martin Corporation*

NASA Commentary – Steve Jurczyk
(5 mins)

3:15 pm **BREAK** – Coffee Available

3:45 pm **Lightning Talks: Frontiers of Space Science**
(10 min Presentations & 5 min Q&A)

Moderator: Claude Canizares

Massachusetts Institute of Technology
SSB, Chair Emeritus

- **Machine Learning and Understanding Our Sun:** *Monica Bobra, Stanford University*
- **Exoplanet Frontiers:** *Natalie Batalha, NASA Ames*
- **Earth Observation and Mobile Software Transforming Farming:** *Molly Brown, Univ. of Maryland*
- **Science Frontiers of the Outer Solar System:** *Candice Hansen, Planetary Science Institute*
- **Human Exploration and the Science of Adapting to Spaceflight:** *Rob Ferl, University of Florida*

NASA Commentary - Thomas Zurbuchen
(5 mins)

Symposium Summary Discussion

4:50 pm **Summary Thoughts on Key Themes and Issues Raised During the Symposium and Concluding Remarks**
(15 mins)

Alan Epstein, ASEB, Chair
Fiona Harrison, SSB, Chair

5:05 pm **Closing Discussion**

All

5:30 pm **Symposium Closes**

Reception :: Keck Center 3rd Floor Atrium (1 hour)
